

Application/Control Number: 10/815,743  
Art Unit: 2837  
August 24, 2006  
Page 2

**Claim Amendments:**

Rewrite claims 15, 17, and 22 as follows:

1. (previously presented) A synchronization device for at least two windshield wipers, of the type that comprises:

at least two wipers, each of which is composed of a blade that is kinematically connected to an electric motor/gearmotor in order to oscillate between two preset positions;

means for activating/deactivating said motor/gearmotor;

means for signaling the transit and direction of transit of each one of said blades through a preset reference position;

means for controlling the signals and driving said activation/deactivation means;

said synchronization device also comprising:

means for determining, at each wipe, the wiping time for each one of said wipers;

means for measuring, at each wipe, and in relation to the transit of said at least two wipers at the respective means for signaling transit and direction of transit, the lead time error of each one of the at least one wiper that is faster with respect to the slower wiper of said at least two wipers;

means for calculating, at each wipe, a correction time in order to reduce said lead time error of each one of said at least one faster wiper such that each correction time is a function of said corresponding lead time error;

means for identifying, at each wipe, said slower wiper;

means for applying, at each wipe, each one of said correction times to said corresponding motor/gearmotor of each one of said at least one faster wiper which interrupt/reduce power of the corresponding motor/gearmotor and reduce the corresponding lead time error.

Application/Control Number: 10/815,743  
Art Unit: 2837  
August 24, 2006  
Page 3

2. (original) The device of claim 1, wherein said means for controlling the signals and for driving said activation/deactivation means, said means for determining the wiping time for each one of said wipers, said means for measuring said lead error, said means for calculating said correction time and said means for identifying, at each wipe, the slower wiper are integrated in a single system for synchronization control and management.

3. (previously presented) The device of claim 1, wherein each wiper with the corresponding means for applying the correction time is connected, by means of an interface, to a communications bus, which in turn is functionally connected to a remote control system.

4. (original) The device of claim 1, wherein each wiper with the corresponding means for applying the correction time is functionally connected to a remote control system by means of an optical or radio link.

5. (original) The device of claim 3, wherein said remote control system contains said means for controlling the signals and driving said activation/deactivation means, said means for determining the wiping time for each one of said wipers, said means for identifying, at each wipe, the slower wiper, said means for measuring the lead time error of the at least one faster wiper with respect to said slower wiper, and said means for calculating a correction time in order to reduce said lead error of each one of said at least one faster wiper.

6. (original) The device of claim 1, wherein said means for applying said correction times are constituted by said activation/deactivation means.

7. (original) The device of claim 1, wherein said means for signaling the transit and direction of transit of each one of said blades through a preset reference position

Application/Control Number: 10/815,743

Art Unit: 2837

August 24, 2006

Page 4

are constituted by a proximity switch for each one of said wipers, said proximity switch being adapted to emit a synchronization signal.

8. (original) The device of claim 1, wherein said means for signaling the transit and direction of transit of each one of said wipers for a preset reference position are constituted by an automatic parking switch for each one of said wipers, said automatic parking switch being adapted to emit a synchronization signal.

9. (previously presented) The device of claim 1, wherein said means for applying said correction time are constituted, for each one of said gearmotors, by a switch that removes power completely from the corresponding gearmotor.

10. (previously presented) The device of claim 1, wherein said means for activating/deactivating said motor/gearmotor comprise said means for applying said correction time, said means for applying said correction time are constituted, for each one of said gearmotors, by at least two switches in a parallel configuration, which reduce the power supply of the corresponding gearmotor.

11. (original) The device of claim 1, wherein said electric motor/gearmotor is of the two-speed type.

12. (previously presented) The device of claim 1, wherein said means for activating/deactivating said motor/gearmotor comprise said means for applying said correction time, said means for applying said correction time are constituted, for each one of said gearmotors, by two switches in a parallel configuration, which select the rotation rate.

13. (previously presented) The device of claim 1, wherein said means for activating/deactivating said motor/gearmotor comprise said means for applying said

Application/Control Number: 10/815,743  
Art Unit: 2837  
August 24, 2006  
Page 5

correction time, said means for applying said correction time are constituted, for each one of said gearmotors, by two switches in a series configuration, a first switch which activates/deactivates said motor/gearmotor, a second switch which selects the speed.

14. (currently amended) A synchronization device for at least two windshield wipers, of the type that comprises:

at least two wipers, each of which is composed of a blade that is kinematically connected to an electric motor/gearmotor in order to oscillate between two preset positions;

means for activating/deactivating said motor/gearmotor;

means for signaling the transit and direction of transit of each one of said blades through a preset reference position;

means for controlling the signals and driving said activation/deactivation means;

said synchronization device also comprising:

means for measuring, at each wipe, and in relation to the transit of said at least two wipers at the respective means for signaling transit and direction of transit, the lead time error of each one of the at least one wiper that is faster with respect to the slower wiper of said at least two wipers;

means for calculating, at each wipe, a correction time in order to reduce said lead time error of each one of said at least one faster wiper such that each correction time is a function of said corresponding lead time error,

means for applying, at each wipe, each one of said correction times to said motor/gearmotor to reduce said lead time error.

15. (currently amended) The device of claim 1, further comprising means for moving selecting a position at which of simultaneous arrival for said at least two wipers ~~arrive simultaneously~~.

Application/Control Number: 10/815,743  
Art Unit: 2837  
August 24, 2006  
Page 6

16. (previously presented) The device of claim 1, wherein said means for identifying said slower wiper are configured to identify said slower wiper based upon a value and a sign of said correction time.

17. (currently amended) The device of claim 14, further comprising means for ~~moving~~ selecting a position ~~at which of simultaneous arrival for~~ said at least two wipers ~~arrive simultaneously~~.

18. (previously presented) The device of claim 14, further comprising means for identifying said slower wiper that are configured to identify said slower wiper based upon a value and a sign of said correction time.

19. (previously presented) A method for synchronizing at least two windshield wipers each of which is composed of a blade that is kinematically connected to an electric motor/gearmotor in order to oscillate between two preset positions, comprising the steps of:

signaling a transit movement of each one of said blades through a preset reference position;

measuring, at each wipe, and in relation to the transit of said at least two wipers, a lead time error of each one of said at least two wipers that is faster with respect to a slower wiper of said at least two wipers;

calculating, at each wipe, a correction time in order to reduce said lead time error of each one of said at least two wipers that is faster with respect to a slower wiper of said at least two wipers such that each correction time is a function of said corresponding lead time error; and

applying, at each wipe, each one of said correction times to a respective said motor/gearmotor to reduce said lead time error.

20. (previously presented) The method according to claim 19, further

Application/Control Number: 10/815,743  
Art Unit: 2837  
August 24, 2006  
Page 7

comprising identifying, at each wipe, said slower wiper, based upon a value and a sign of said correction time.

21. (previously presented) The method according to claim 20, further comprising determining, at each wipe, a wiping time for each one of said wipers.

22. (currently amended) The method according to claim 21, further comprising ~~moving~~ selecting a position at which of simultaneous arrival for said at least two wipers ~~arrive simultaneously~~.